

# **History of Interactions with EPA on the LPR/NB Model**

**November 14, 2013  
EPA/CPG Meeting**

# CPG – EPA Modeling Interactions

## Overview

- The CPG is charged with the development of the LPR/NB model in support of the RI/FS
  - Details are specified in the EPA/HQI Modeling Workplan (2006), including the use of the CARP model framework
- EPA Region 2 has an oversight role in the model development
- Modeling interactions have been ongoing since ca 2008:
  - Formal meetings
  - Conference calls on specific topics
  - Emails and other correspondence
  - CPG document submissions
  - Code transmittals

# CPG – EPA Modeling Interactions

## Formal Meetings

- To date, there have been at least 18 formal meetings on LPR/NB model development:
  - “Semi-Annual Modeling Meetings”
    - July 2008, March 2009, Dec 2009, June 2010, Feb 2011, Nov 2011
  - “Model Collaboration Meetings”
    - Apr 2011, May 2011, July 2011, Sep 2011, Jan 2012, March 2012, Jun 2012, Sept 2012, Feb 2013
  - Several additional meetings on specific topics; most recently
    - March 2013 (COPC Mapping)
    - June 2013 (Initial Projection Results; Deposition Rate Mismatches)
    - Sept 2013 (COPC Mapping)
    - Today (Overview of LPR/NB Model Development)

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## Hydrodynamic/Sediment Transport Model

- Major topics and meeting dates
  - LPR ST system understanding – June 2010
  - Initial ST model application (short term, high and low-flow) – Nov 2011
  - Bathymetry analysis – June & Sep 2012
  - Extended ST model application (long-term) – June 2012
- Documents/codes/inputs submitted
  - ST model development and calibration status memo, code and inputs – Jan 2013

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## Organic Carbon Simplification

- Overview of meetings and topics, documents/codes/inputs submitted
  - Initial presentation on OC simplification – M a r c h 2009
  - Formal proposal on OC simplification – J a n 2010
    - Several follow-up conversations and documentation – 2010 through 2011
  - EPA approval of OC simplification – S e p 2011
  - CPG memorandum on implementation of OC simplification – May 2012
  - CPG presentation on implementation of OC simplification – Sept 2012
  - OC simplification codes & inputs transmittal to EPA – A p r 2013

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## Contaminant Fate & Transport Model

- Overview of meetings and topics
  - COPC Mapping
    - Initial approach (groupings and IDW interpolation) – Nov 2011 and Jan 2012
    - Revised approach (adjusted groupings and Thiessen interpolation) – Feb 2013, March 2013, and Sept 2013
  - CFT Model Development
    - Initial long-term runs and application to first CWCM event - Jan 2012
    - Initial projection application (MNR) - March 2012
    - Tests to debug/reduce tidal pumping loss - Sept 2012
    - Assessing boundary conditions with CWCM data – Sept 2012
    - Overview of model refinements & calibration approach – Feb 2013
    - Initial projection results & mismatches in net sedimentation rate – June 2013

# **CPG – EPA Modeling Interactions**

## **Contaminant Fate & Transport Model**

- Documents submitted
  - Memorandum on initial CWCM data analysis - May 2013
  - Memorandum on revised CPG COPC mapping approach - May 2013
  - Presentation and summary table on inconsistencies in net sedimentation rates within the LPR/NB Model Framework - Oct 2013

# CPG – EPA Modeling Interactions

## Code/Input Transmittals from EPA/HQI

- Most recent code transmittals from EPA/HQI include
  - HST Model
    - Code: Nov 2011
    - ST Inputs: Nov 2011
    - Full-grid HD Inputs: Nov 2013
  - CFT Model
    - Codes: April 2012
      - Revised dredging module in Feb 2013
    - Inputs: Sept 2013
      - Remediation info (worksheets) in March 2013